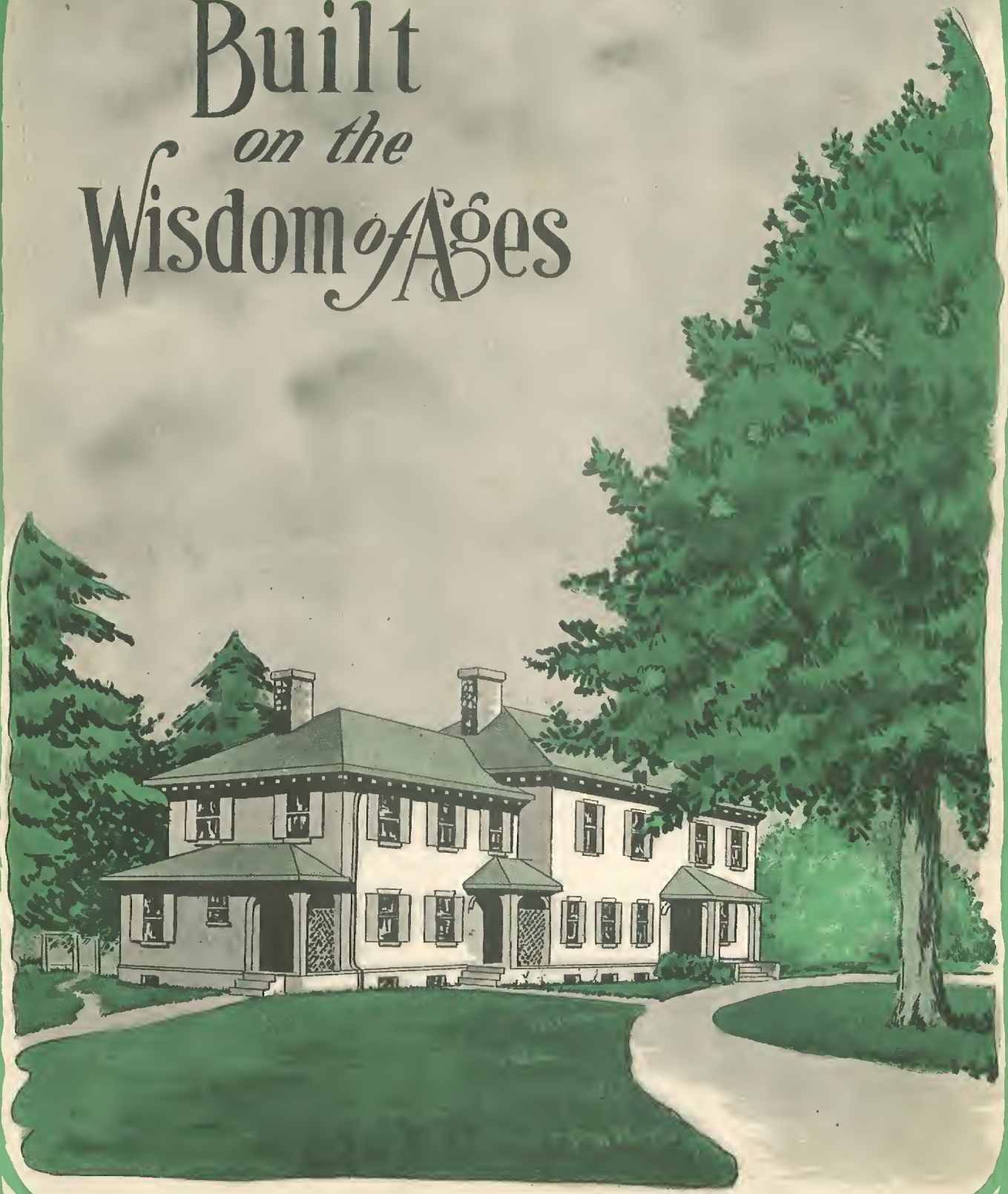
# Built *on the* Wisdom of Ages



# BISHOPRIC STUCCO OR PLASTER BOARD

## Built On the Wisdom of Ages

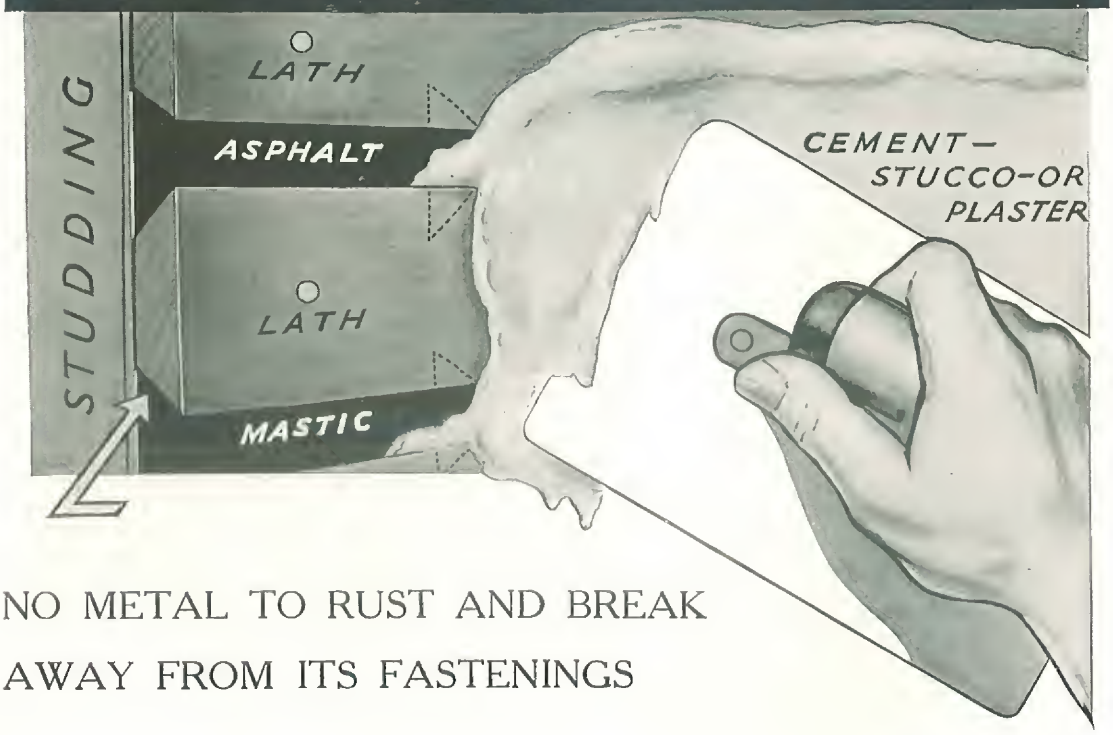
¶ A modern combination of materials and principles that ages of actual use have proven the most efficient in building construction

□ □

**The Mastic Wall Board & Roofing Co.**

Cincinnati, Ohio

# THE DOVETAILED LATH




NO METAL TO RUST AND BREAK
AWAY FROM ITS FASTENINGS

**NOTE**—How the Stucco-Cement or Plaster is Locked in by the **Dovetail Lath.**

**NOTE—The Heavy Coating of Asphalt Mastic—non-**porous; non-conductor of heat or cold. Dampness cannot penetrate a perfect **"Sound-Deadener".**

## *Part One*

Beginning with page *four* — the composition and construction of Bishopric Stucco Board — its advantages, economy — how applied to old buildings as well as new — its superiority over other backgrounds for Stucco, Cement or Plaster, and our Guarantee.

## *Part Two*

Beginning with page *eleven* — "Objections" to Bishopric Stucco Board anticipated and answered in detail.

## *Part Three*

Beginning with page *sixteen* — directions for applying Bishopric Stucco or Plaster Board, comparative facts and figures on costs, specifications for Stucco, and how window and door frames should be made to make watertight jobs.

## *Part Four*

Beginning with page *twenty* — report of tests of Bishopric Stucco Board made by H. W. T. Collins, Mech. Engr., of the University of Cincinnati.

## *Part Five*

Beginning with page *twenty-six* — reproductions from photographs of buildings constructed with Bishopric Stucco Board, and testimonials from owners and builders.

## *Part Six*

Beginning with page *seven*—takes up in detail the weight, and style of package.

## *Part Seven*

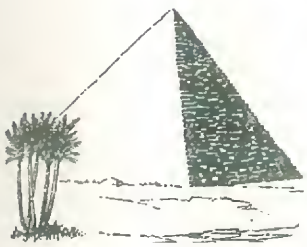
Beginning with page *forty-six*—takes up in detail the construction, uses and merits of Bishopric Sheathing.

# *By Way of Introduction*

WITH economists, the world over, ringing the changes in discussion on the vital question of the high cost of living, the building world has witnessed the cheerful spectacle of building costs **chopped right in two.** Bishopric Stucco or Plaster Board has revolutionized old-time building methods and made possible the saving of 25% of old-time building costs. Modern homes can be finished in plaster, cement or stucco for just 25% less the old contract price for the work before the Bishopric idea came to **lighten** the burden of building and **increase** the value of the work. Bishopric Stucco Board is not an experiment. It is nothing more than a modern, **patented** combination of materials and principles that have been in constant and successful use by master builders for ages. Bishopric Stucco Board itself has stood the practical test of use for years and it has always "stood up" and always made good — giving permanence to plaster and cement walls that with a Bishopric background will not disintegrate and prevents cracking, making most effective insulation.

## *A Secret of the Pyramids*

The dovetail locked joint in Bishopric Stucco Board holds the stucco "for keeps," and in the Pyramids and many buildings of the ancients which have defied time, the same unequaled plan of dovetailing is found. The lath used in this Stucco Board are thoroughly treated with creosote, or furnished plain without creosote treatment —the preservative adopted by wisest corporations in *insuring* the greatest possible life of lumber, railroad ties, telegraph poles, etc. By the very same token and for the very same reason, nothing ever dedicated to modern building needs will hold its own in comparison with Bishopric Stucco Board as a material that will withstand the severest weather conditions.



Bishopric Stucco Board is proof against moisture and vermin. Asphalt, successfully adapted by the ancient Egyptians to preserve their mummies, is now used in the form of toughened Asphalt Mastic between the lath and the fibreboard backing. It is this combination of centuries-old, time-tested, efficiency-proven materials and principles, "Built on the Wisdom of Ages," that make Bishopric Stucco or Plaster Board absolutely reliable and dependable.

## *Saves 25% on Building Material*

Choose the Bishopric System of Building and you will save at least 25% in cost of building materials, because it makes unnecessary the use of lumber and building paper, saves cement and gives you absolute protection against all future troubles so common to ordinary plaster or stucco work. Many of the best known architects, engineers and builders—men who KNOW, and are recognized experts in their line—agree that Bishopric Stucco Board, is the *ideal*

background for stucco, cement or plaster. They specify it and use it in the modest cottage, the artistic bungalow, the pretentious apartment building and the modern factory. It is also popularly adapted for *inside* walls as a background for plaster.

Bishopric Stucco or Plaster Board means much in *better* work for *less* money and enables you to BUILD ONCE AND FOR ALL, giving work that is put there to STAY.

## *Old Houses Changed to New*

Scores of house owners have taken their old frame buildings and quickly and at *very low cost* transformed them into *modern,* up-to-the minute structures. The plan is an appealing one. It is simple, easy and very little money is required. All that is necessary is to nail Bishopric Stucco or Plaster Board over weather boarding, or other finish, and apply Stucco. In this way you can, without the aid of Aladdin's Lamp, enjoy the greatest satisfaction and get rid of continuous painting and repairs.

## *Things YOU Should Know*

Here are some MIGHTY GOOD THINGS TO KNOW. This should be called a platform of Bishopric performance. You can bank on every statement, and more than that, every square foot of Bishopric Stucco Board is sold under our absolute guarantee or money back if not as represented.

Laths are so keyed that they LOCK the plaster in, on and up forever. Plaster, stucco, cement, concrete, simply *cannot* loosen, and

fall out. The material is "locked in" *for keeps.*


The thick layer of Asphalt Mastic in which the laths are imbedded under great pressure, is wind, weather and vermin proof and fire-resisting.

Back of the asphalt is the groundwork for the wonderful, ingenious construction—an extra heavy layer of fibre board which affords further protection against weather and other conditions.

## *Easy to Get*
## *Easy to Apply*

Bishopric Stucco Board comes in 25-foot lengths, four feet wide, suitable for studding at standard centers.

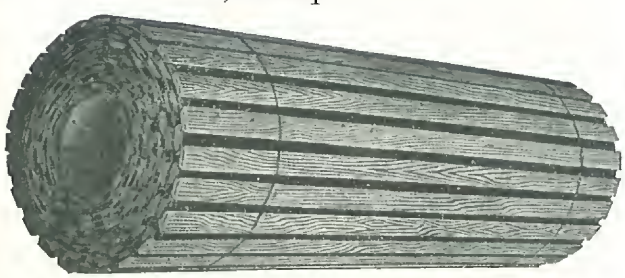
All you have to do is to nail Bishopric Stucco Board to bare studding and the walls are ready to cement. Plaster or stucco.

One man can do a "master job" and put on Stucco Board faster than cement plasterers can follow.

Hand-saw, hammer and nails are all you need to apply it. *You* save the big difference in cost of labor.

There is no waste of either material or time. Every foot of Bishopric Stucco Board is utilized. You do not have to pay for window and door spaces. These little "rake-offs" of old-time methods are cut off and *saved to you.* When you order 1,000 square feet of Bishopric Stucco Board you can cover 1,000 square feet of wall.

Bishopric Stucco or Plaster Board creosoted, weighs 1,000 lbs. to 1,000 sq. ft.



STYLE OF SHIPPING PACKAGE.

Bishopric Stucco or Plaster not creosoted, weighs 900 lbs. to 1,000 sq. ft.

Bishopric Stucco Board is shipped in rolls containing one sheet 25 ft. long, 4 ft. wide (100 sq. ft.)

## The Superiority of Bishopric Stucco Board

Bishopric Stucco or Plaster Board will take and *hold* ANY OUTER material.

It is *far* superior to cement blocks, so hard to dry and productive of a damp, unhealthy atmosphere within the house.

And here's a *big* saving point to remember: A very thin concrete wall over Bishopric Stucco Board keeps the house warm in winter and cool in summer.

## The Passing of Metal Laths

Bishopric Stucco Board far outranks in *practicability* metal laths, which rust, break and are the cause of so much cracking in some stucco or cement houses.

For those who *know,* from the big expense and unsatisfactory service, the days of metal laths are over and they have gone into the discard with other things which have been surpassed by later and better inventions. It is absolutely impossible—as many building experts testify—to secure a good stucco job with a light, flimsy background, such as metal lath. Wood Lath makes a *rigid* background, hence it can not sag. The "key" in Bishopric Lath holds cement and plaster as nothing else can.

There are no good reasons why metal lath should have the preference over Bishopric Stucco Board, which *stays stiff* and grips the cement as nothing else can, forming a *permanently* solid back-

ground. There is absolutely no "cost of upkeep" as in old-style backgrounds which sag, spring and crack, costing a lot of money for repairs as time goes on.

## *Costly Handicaps of Metal Lath*

Metal lath, for example, means big repair bills. This is a leaf from the Book of Experience. They rust, break, pull loose and crack the walls. Very little of the flimsy background is really nailed fast to its supports. Occasional nails or staples are all that hold the cement walls to the studding. Once broken by the weight of the walls and these loose metal backgrounds sag under the strain. Cracks follow quickly. Once cracking starts it travels fast and far. One never knows where it will end. The expense for repairs is considerable. Good judgment would choose a *permanent* background like Bishopric Stucco Board rather than one liable to suffer from the ravages of rust.

## *Easy-to-Understand Finance*

You don't have to be a Master of High Finance to figure out this saving problem. The *first* cost of metal lath is greater than that of Bishopric Stucco Board. To get rigid walls you must use *one-third* to *one-half more cement,* if you choose metal lath. In other words, if you want to *double* the cost of your stucco work and get *unsatisfactory* results, use metal lath; but if a first-class, *permanent* stucco job is what you want at 25% less cost, be certain that you use nothing but Bishopric Stucco Board.

There is *absolutely no metal* in Bishopric Stucco or Plaster Board, hence, it *can not rust*. Its lath are *nailed to the studding* and have 1,000% more *holding* power than metal lath as commonly applied for stucco work.

## *Bishopric Stucco Board Advantages*

Handling "Objectors" with the Gloves of Truth.

Bishopric Stucco or Plaster Board has made such tremendous inroads upon old-time methods of building that echoes of the "Hammer Chorus" of the "By-Gones" and the "Passing-Ons" have been heard in the building world. In the face of insidious and invidious comparisons, the Bishopric idea continues to meet with cheerful, emphatic indorsement from the brains of the building profession—the architects who stake their own reputation upon Bishopric Stucco Board as a material that has been tried and not found wanting. Assaults from the metal lath makers are to be expected. They are fighting a losing fight with all the argument against them.

President Allison Bishopric of The Mastic Wall Board and Roofing Company, has harvested a crop of the insinuations of the "antis" and offers a broadside which has silenced the batteries of those who have unsuccessfully tried to block the wheels of progress of an institution which has backed its own faith with great works which has made it possible for thousands to build and build well at just 25% of the old cost, while hewing closely to the successful building experience of mankind all through the ages.

You may find in these fourteen articles convincing evidence in rebuttal, an answer to any "objection" you may have heard.

# *A Few "Objections" Anticipated*

## *1. "Heat Expansion Will Buckle It"*

The fact is that it is proof against this condition which metal lath is not. Wood will shrink, not expand, under heat. If it shrinks, no harm is done, for the shrinkage is infinitestimal and will not lessen the hold of the dove-tail on the clinch. Each shrinkage will be on the separate individual lath and will not affect the sheet. The lath, of course, will not be affected lengthwise. The asphalt and card backing is sufficiently elastic to take up all expansion by the thickening of the backing. The cement coating will expand about half an inch to fifty feet and an increase or decrease of one ten-thousandth of an inch in thickness of the backing will account for that amount of expansion. Thus, the backing being elastic, will overcome all expansion easily. These figures cover a variation in temperature ranging from six below to one hundred and thirty degrees above zero.

## *2. "Dampness Will Expand the Wooden Strips and Crack the Stucco"*

The lath strips are made of a resinous wood, which resists moisture, and if there is any actual expansion as well as a theoretical one, it is not greater than the movement of the cement mixture in its chemical action when the mixture is properly made and applied. There is positively no greater tendency to crack when setting than on metal lath, and actual experience shows that there is none whatever on the stucco when used on stucco board, if the work is properly done. It should be remembered that a richer mixture than three to one is too rich for preparation of waterproofing compounds, and the surface will have a tendency to crack. A leaner mixture than three to one has too much sand for proper filling of the tiny spaces with cement and compounds, and is not sufficiently strong for permanency. The cement mixture cannot properly perform its chemical readjustments in dry and windy weather before it will set, unless the surface is sprayed; if this is done there will be no cracks of any kind and if the stucco is waterproofed in its first and second coats there can be no expansion of the lath strips and no after-cracking. At 802 Parker Street, Newark, N. J., the stucco, after setting and months of drying, was kept reeking wet for about three weeks to test this point, and the result was that there was not a single weakness of any kind developed. Ordinary weather would never give it such a severe test as this. This building was waterproofed with two pounds hydrotite to each one hundred pounds of cement on about three-fourths of the building, and with a seven to ten per cent of hydrate of lime for the balance as a water proofer. Actual tests showed one hundred per cent of satisfactory results in each case. The third and fourth coats (both dash) were one to one mixture with no waterproofing. On this job there was a saving of forty-five per cent of material as compared with a wire-cloth job at 74 Hillside Avenue, Orange, N. J., done by the same mason a few weeks before. Cracks have developed in the latter job, but not in the former. No dampness from leaky windows and leaky gutters can reach the lath strips, as they are protected with an absolutely waterproof sheet of asphalt mastic.

### 3. *"The Weight of the Stucco Will Tear Off the Lath"*

No, it will NOT, if the lath are properly nailed, a nail being used to each lath at every point where it crosses a stud, or four nails to each lath where used over sheathing. A house recently stuccoed on wire-cloth in Maplewood, N. J., has recently had the sad experience of having the stucco fall, due to too few staples being used, and rarely are more than one staple used to each square foot. With four nails in each lath strip, this stucco board will last for generations. Stucco weighs from ten to fifteen pounds per surface foot, and it should be supported with the nailing obtained in Stucco Board, not the few scattering staples generally used. Then, again, for a nail to break it must be a clean shearing process, as it must break between the lath and stud where there is no space, while the staple usually holds the lath somewhat extended from its bearings.

### 4. *"The Lath Strips Will Dry Rot"*

Some say this who have seen stucco houses have their sheathing and frames rot away in a few years. As the asphalt mastic will prevent dampness reaching the frames, no dampness can get at the lath strips from inside, and if the stucco is waterproofed as above, no dampness can strike it from without. Moreover, imbedded between the asphalt mastic and the cement, completely shut away from the air, there can be no air action and consequently no rot. In the everglades of Florida, are logs lying in the water that have been there for centuries; remove them and expose them to the air and they will rot as other wood. Houses are painted to keep away the air. Boards properly painted on both sides have been known to last for centuries. Enterprising farmers have for years imbedded their fence posts in waterproof concrete footing to make them permanent. These lath strips imbedded between the asphalt and cement will outlive the house itself. The metal lath of the cheaper grades will rust to powder in from three to five years, and the better grades in comparatively shorter periods. In some of the seashore towns owners have used common lath recently in the hope of getting away from metal lath troubles.

### 5. *"The Building Rocking In the Wind Will Tear the Backing Board"*

This is distinctly untrue. A settlement of three sixty-fourths of an inch will crack the walls seriously if the settlement occurs during a period of twenty-four hours. Storms rarely crack the walls of a house, except real tornadoes. This shows that rocking is really vibration, as otherwise the walls would equal a central settlement of three sixty-fourths of an inch, and that is only about one one-hundred-and-twenty-eighth of an inch to a four-foot piece of wall board. The wall board is sufficiently elastic to accommodate a motion of one thirty-second of an inch at each edge or a total of one-sixteenth of an inch; hence, it is four times safe. Another view is that the wall board is more elastic than plastering and as plastering stands ordinary storms the wall boards will still better stand them.

### 6. *"The Clinch Will Break Off"*

Oliver Wendell Holmes in his "Wonderful One Hoss Chaise," that ran a hundred years to a day, had every point just as strong as another; there was no weak point. If you use good material and put it on thick enough the outside wall will be strong enough; then if there is a weakness, it will be that the clinch is not wide enough, for the dovetail groove will not allow the stucco to get away, the nails will not allow the wooden strips to get away, the waterproofing will not allow the strips to rot, the mastic will protect from the inside, the liberal nailing will not allow the weight of the stucco to give any trouble, and thus the only weakness can be cured by making the clinch wide enough. When plastering is broken away it is the clinch that fails. Look at an old plastered wall being torn down, and see the clinch stay between the lath after the plastering has fallen, and it will be clear to you that the weakness was the clinch not being wide enough. It could not be on the ordinary lath, because the pressure of the trowel would have pushed all the mortar through the wall if the lathe had been wide enough apart. On the stucco board there is a mastic background, and the mortar will not pass through, thus the space can be made any amount desired, and the board is supplied with wide openings, which is as strong as the strongest other parts.

### 7. *"The Stucco Will Not Stick To the Surface of the Lath Strips and Will Come Off Between the Clinch Lines"*

This is partly answered in the last section. If this criticism was true then all plastered walls would fall, and all old-fashioned mortar walls, all patent plaster walls, all cement mortar walls, would have fallen long ago. From time immemorial mortar work on frame exteriors in foreign countries (England among them) has been done on wooden lath, and this defect has not been known among the natives. Ordinary lath has no surface advantage over the lath used in Bishopric Stucco or Plaster Board, and the clinch is far superior in the mastic boards.

### 8. *"It Cannot Be Used in Panelled or Half-timbered Effect Without So Much Cutting that the Cost Would Be Prohibitive"*

There is no occasion for such cutting. Put the stucco board on the building before trimming, then use seven-eighth-inch stock instead of one and one-eighth-inch and save twenty-five per cent on your pine or cypress bills. Nail your seven-eighth-inch panel strips on over the stucco board and save a lot of labor as compared with shipping wire lath. Remember, too, that you are saving about forty to forty-five per cent of your mortar, as compared with metal lath work.

### 9. *"The Shrinking of the Sheathing Will Crack and Buckle the Stucco Board"*

Put the sheathing on horizontal; it is the best way; it gets more nails than diagonal; it does not mislead in the location of a leak that follows the shiplap; it does not pry open the house in setting, as in diagonal work, and it ties the house

together better. Then put the stucco board on vertical. The shrinkage of the sheathing cannot buckle the stucco board when end grain crosses side grain. When the stucco board is put directly on the frame, put it on horizontal so that it will cross the grain of the studs or wall strips. If you must use diagonal sheathing, it is best to put the stucco board on also diagonally in the opposite way, so that it will cross the grain. Do not be afraid to use the Stucco Board *vertical*. It was used that way at 802 Parker Street, Newark, N. J. When the stucco is SET it cannot get away because of the dovetail grooves; when it tries to slide down it cannot because of the rough uneven groove. If the stucco is not washed down by a hose while you are putting it on, it will adhere just as it did at Parker Street, and everywhere else where it is used vertically. Remember, it should always CROSS the grain of the underwood just as is the case with double floors.

### *10. "Except In Balloon Construction, It Will Buckle Where and When the Intertie Shrinks"*

The shrinkage of an intertie will be about one-twelfth of an inch, and it is possible that in rare cases buckling could happen; but there is a sure remedy: use a belt line of about the same or greater vertical measurement. For a four-inch intertie use a belt line four inches or more; for a six-inch intertie use a six-inch or more belt line. You should do the same thing when metal lath is used, for the same risks exist. You should do the same thing in your stairways at the second and third floor lines—break out a two or three-inch line in the plastering and cover with a facier board running around the stair well hole, or where wall board is used leave a one-inch opening.

### *11. "It Cannot Be Used Around the Cornice, Under Eaves, and In Other Small Places, As Wire Can"*

The contrary is true; it is better than wire for such places. If you use wire you must always have sheathing, while this is sheathing itself. See the time and cost saved in building porches—nail on the stucco board and porch is built and lathed at the same time. Try it once and you will realize that it is a great time saver compared with wire lath and snip shears.

### *12. "It Is Not Fireproof Like Metal Lath"*

A salesman of the cheap kind of metal lath recently said he was ashamed to sell the lath that sells at fourteen cents per square yard, as it will not last long enough for him to get out of the state; to our positive knowledge such lath often if not generally causes repairs to begin in about three or four years. The best metal lath is the wire cloth or wire mesh galvanized, but that has been condemned by the National Board of Fire Underwriters, as it is held by soldered joints, and the solder melts in a fire. In one case the lath is rusted out before the fire comes, and in the other case it melts, and so both fail. The stucco board has a fire-resisting backing and the lath cannot burn because they are imbedded between and in asphalt

mastic and cement. It cannot rust; it will be there when the fire comes, if it comes, and it will be the last thing to go. It is, therefore, far superior to the metal lath for fire resistance.

## *13. "It Is No Cheaper to Use Than Metal Lath"*

If it were not cheaper—yes, even if it were dearer—it should be used on the ground that it is better. But, listen! Good wire mesh costs five cents per foot in small lots, and from three and one-half to four cents in larger lots for a whole house. This sells for three cents per square foot. Then you save the waterproof paper at $2.00 per roll, the furring, and the stapling, as well as the nailing of the furring; adding only in this case the labor and nails of putting on the stucco board. As for the cheaper metal lath, you should be ashamed to use it, but we still doubt the saving. The cheapest lath that should be used or can be used with an ordinary American conscience, costs twenty-five cents per yard. Add to this paper at four cents per yard, and a saving in material which the stucco board makes of at least eight cents per yard, to say nothing of the saving in labor which is the big item, and you have thirty-seven and one-half cents as against thirty-three cents for stucco board. It is a general fact that good stucco cannot be done on wire lath without a loss of about twenty-five cents per yard as compared with stucco board, and that is an item of $100 on an ordinary two-family house. Then comes the saving in sheathing on a new house, for the stucco board is sheathing, and high grade waterproof sheathing at that. This saving is about $150 on such a house. Thus, we can save you $250 on the outside, and we can show you a saving of about $200 on the 1,000 yards of plaster on the inside by using the Bishopric Stucco and Plaster Board. Thus we show a total saving of about $450, which is more than many builders now make on a house (New York City prices).

## *14. "The Stucco Will Crack On First Coats When Setting By Reason of the Lath Strips Swelling"*

Not if you follow directions. A rich stucco will have a tendency to cause surface cracks, and a lean stucco will not be permanent. A body mixture of three to one with seven per cent hydrate of lime will make a satisfactory medium lean mixture that will not crack if it is not allowed to set too rapidly. In cool, damp weather there will be no difficulty; and in warm windy weather the setting of the cement must be retarded by spraying the stuccoed surface with water. This is true whether stucco board or metal lath is used. A good job can only be secured by proper methods of working. If the stucco is allowed to dry too rapidly, the thinner sections between the clinch will set first and then when the shrinkage comes from the rest of the material setting, cracks will show, as is well known in stucco work. Follow these proportions and the spraying process and the results will be all that can be desired.

# *Directions for Applying Stucco Board*

CARE OF THE MATERIAL—It is necessary to keep the Stucco Board dry. It should be put under cover promptly on arrival and protected from rain and dampness. When applied to the building it should be thoroughly nailed as fast as put on so that rain will not twist the lath strips before they are fastened. When once thoroughly nailed it does no harm to wet them; in fact, in dry weather it is not a bad idea to sprinkle the exposed surface before applying the stucco. If the lath strips are swelled they can never swell more, and if damp there will not be so great a suction and consequent quick setting of the cement on the surfaces of the strips. It is therefore well to have the lath strips sprayed if dry.

VERTICAL AND HORIZONTAL—Be sure to always have the lath strips cross the grain of the under surface; if the stucco board is applied directly to the studs or wall strips, it should be horizontal, but if put over horizontal sheathing it should always be vertical. Do not imagine that the mortar will not adhere to the vertical strips, for experience shows that it will with the utmost satisfaction. If the sheathing is diagonal, the stucco board should also be diagonal in the opposite direction, so the two grains will still be crossed. But, as there are so many reasons for having the sheathing horizontal and so few for diagonal, it is hardly worth while considering the diagonal method.

BRACING THE FRAME—There is really no reason for using seven-eighth-inch sheathing in addition to the stucco board (which is sheathing). See engineer's report, page 20.

WINDOW AND DOOR FRAMES—For detail description illustrating how they should be made to make water-tight jobs, see page 18.

CUTTING—Saw across the lath strips with a sharp, well set saw, laying the sheets on a bench for the purpose, or on a pair of boxes with a couple of strips of scantling on top and saw between them. For lengthwise cutting, use a coarse rip-saw in the sheet between the lath strips from the black side. If a sheet is slightly large, remove a strip of lath and with snips cut off the sheet and replace the lath as required. Small pieces may be nailed in vertical or horizontal, if the nailing is done near the center of the sheathing board, the purpose being to avoid action by shrinking of the sheathing boards.

NAILING—In applying Bishopric Stucco or Plaster Board, it is nailed direct to the studs, sixteen inches apart, with No. 6 galvanized wire nails, which makes it absolutely impossible for this board to buckle or warp, or give you any trouble whatever on the wall.

We have sold hundreds of jobs of this material which are giving the utmost satisfaction and will be glad to give you references.

BREAKING JOINTS—We advocate breaking joints at least every four feet, thereby avoiding continuous joint and adding greater strength and rigidity to building.

We have sold hundreds of jobs of this material which are giving the utmost satisfaction and will be glad to give you references.

# *Facts on the Cost of Wall Construction*

The following figures show, for comparison, the average approximate costs of 1,000 square feet of finished outside wall construction using (1) Weatherboarding, (2) Wooden Shingles, (3) Metal Lath with Stucco, (4) BISHOPRIC STUCCO OR PLASTER BOARD with Stucco.

(1) WEATHERBOARDING

| | |
|---|---|
| 1,200 square feet Boarding at $22.50 per thousand | $ 27.00 |
| Labor to apply boarding | 7.00 |
| 1,000 square feet Sheathing Paper | 4.00 |
| Labor to apply paper | 2.00 |
| 1,300 square feet Weatherboarding at $30.00 per thonsand | 39.00 |
| Labor to apply same | 10.00 |
| One coat Priming, two coats Paint (Prime, 2 gal. at $1.25 per gal. Paint, 3½ gallons at $2.00 per gal.) | 9.50 |
| Painter's labor (3 coats) | 9.00 |
| | $107.50 |

(2) WOODEN SHINGLES

| | |
|---|---|
| 1,200 square feet Boarding at $22.50 per thousand | $ 27.00 |
| Labor to apply same | 7.00 |
| 1,000 square feet Sheathing Paper | 4.00 |
| Labor to apply same | 2.00 |
| 10,000 Shingles at $5.50 per thousand | 55.00 |
| Labor to apply same | 20.00 |
| Two gallons Creosote Dye or Stain at $1.25 | 2.50 |
| Painter's labor (1 coat) | 2.00 |
| | $119.50 |

(3) STUCCO OVER METAL LATH

| | |
|---|---|
| 1,200 square feet Boarding at $22.50 per thousand | $ 27.00 |
| Labor to apply same | 7.00 |
| 1,000 square feet Sheathing Paper | 4.00 |
| Labor to apply same | 2.00 |
| 1,000 lineal feet Furring Strips | 6.25 |
| Labor to apply same | 2.00 |
| 1,000 square feet Metal Lath at 22c per square yard | 24.42 |
| Labor for applying same | 4.00 |
| Three tons Cement Stucco at $6.00 a ton | 18.00 |
| Labor to apply three coats Stucco at 40c per square yard | 44.40 |
| | $139.07 |

(4) STUCCO OVER BISHOPRIC STUCCO OR PLASTER BOARD

| | |
|---|---|
| 1,000 square feet Bishopric Stucco or Plaster Board | $ 30.00 |
| Labor to apply same | 6.00 |
| 1¾ tons mixed Cement Stucco at $6.00 per ton | 10.50 |
| Labor to apply same in three coats at 40c per square yard | 44.40 |
| Note the saving on this wall | $90.90 |

NOTE—If your local prices on lumber and other raw materials differ from the above, substitute your prices in comparing the four methods.

AVERAGE COMPARATIVE COSTS PER SQUARE YARD

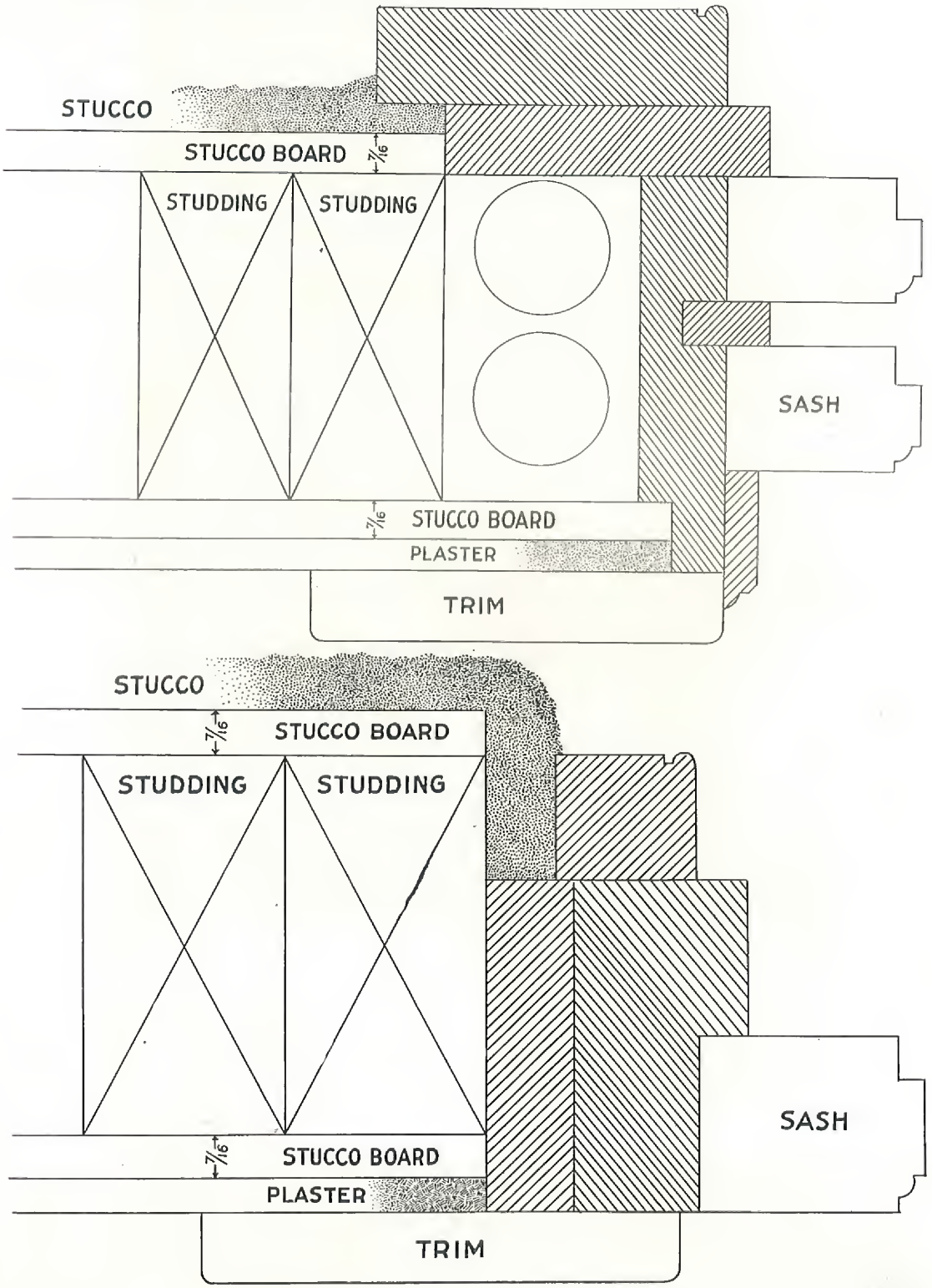
| | | |
|---|---|---|
| Weatherboarding | $1.06 | per square yard |
| Wood Shingles | 1.07 | " " |
| Stucco and Metal Lath | 1.25 | " " |
| Stucco and Bishopric Stucco Board | .81 | " " |

*No. 4—Lasts forever. Is absolutely moisture-proof, is stronger and warmer than lumber and building paper could make it, never needs painting, greatly reduces fire insurance rates and costs nothing for upkeep.*

In addition to this immense saving in the cost of construction, we wish to call your attention to the fact that the weight of the stucco is more evenly distributed over Bishopric STUCCO OR PLASTER BOARD, thus lessening the danger of any unusual strain which might cause your stucco wall to crack or give away. Also by mixing a small quantity of hydrated lime with your cement stucco when preparing it, you will waterproof your stucco so as to make it absolutely impossible for any moisture to penetrate to the board. Acids in cement rust and corode the best galvanized metal lath, but acids in cement in no way injures wooden lath.

SIMPLE METHOD OF CONSTRUCTING WINDOW AND DOOR FRAMES

Note how stucco is rounded into and under hanging stiles. This method will secure air and water tight frames around the openings.



# *Stucco Specifications*

## *For Use on Bishopric Stucco Board*

No matter what the foundation or background for the Stucco finish may be, unless the Stucco itself is properly compounded the results are bound to be unsatisfactory.

Mr. Albert Moyer, member of the Associated American Society of Civil Engineers, has prepared the following specifications for Stucco finishes that can be absolutely relied upon.

LATH—Secure the Bishopric Stucco Board firmly by putting a nail in each lath in every stud.

PLASTER—Mix 10 parts of Portland Cement, one part dry, pulverized, hydrated lime, measured by volume, add dry, clean sand in proportion one part cement lime mixture, two parts sand. Turn with shovels, raking while shoveling, until the mixture is of a uniform color. Add necessary water to make a stiff plaster and turn several times with shovel, raking while shoveling.

PLASTER WITH LIME PUTTY—Dry mix one part Portland Cement, one part sand, just before using. With this mix one part lime sand paste, add water to bring to proper consistency.

N. B.—To make lime sand paste, slake double strength lime for one week, strain, mix one part lime and nine parts sand.

FIRST COAT—Start plastering at top of wall and make surface continuous from corner offset to corner or other convenient stopping place. One day's work to be completed from top to bottom of wall. Force plaster well into dovetail of Bishopric Stucco Board. Scratch deeply over entire surface of plaster while it is wet.

SECOND COAT—Mix second coat in same proportions as first coat. Apply second coat as soon as first coat will bear pressure of trowel. Second coat must not be applied to any part of first coat which shows any drying of the surface. Make second coat from ½-inch to ¾-inch thick.

THIRD OR FINISHING COAT—Mix third coat same as second coat. Apply third coat as soon as second coat is strong enough to support it. Third coat must not be applied to any part of the wall where the second coat shows any signs of drying on the surface and must be continuous from corner to corner or other convenient stopping place, and from top to bottom of wall in one day's work. Finish third coat in accordance with specifications for finishing.

PORTLAND CEMENT—"Vulcanite" or equal.

SAND—Well washed, coarse and well graded. All sand must pass through a ¼-inch mesh screen.

CURING OR SEASONING—Keep entire surface continuously damp for one week. If the weather is dry and windy, hang tarpaulins or some form of cloth over surface and keep the cloths wet.

## *Finishing Stucco Surfaces*

OAKUM FINISH—Take a handful of oakum about the size of your two hands bundled up and work in a circular movement over the surface of the stucco, not pressing too hard. This should be done after the stucco is fairly hard but still soft enough to receive the impression of the thumbnail. Dampen the oakum from time to time and a smooth and interesting surface will result.

To brighten up the surface, make a solution of one part commercial muriatic acid, five parts water. Use large whitewash brush and paint the surface with this mixture. As soon as the effervescence stops, wash with hose and clear water.

BRISTLEBRUSH—Another effect can be produced by following the above methods and using an ordinary home scrubbing brush instead of a piece of oakum.

WIRE BRUSH—Still another effect can be produced by allowing the stucco to get a little bit harder and using a wire brush. The cement finisher will soon learn the consistency to bring about the effect desired.

TILE INSERTS—If it is desirable to insert colored clay tile in design or panels to form a spot of color, this should be provided for by nailing lightly to the Bishopric Board a wooden block or slab ¼-inch larger than the exact size of the tile or panel that is to be inserted. After the stucco has been applied and is hard, remove the wooden block or slab and set tile in much the same manner as you would set floor tile.

BROOM DASH FINISH—While the last coat of the stucco is still thoroughly damp, apply a Portland Cement mixture composed of one part Portland Cement, 12 per cent of the volume of the cement of well hydrated lime in pulverized form, and one part of the volume of the cement of fine white sand. Mix with water to the consistency of cream or the ordinary cold water paint. Stir constantly and apply by using a whisk broom, throwing this paint on the surface of the stucco with some force. This will give a very pleasing effect. Keep this finish surface damp for at least six days and longer if economy will permit. Do not allow it to dry out in any one place during the week. If the weather is hot and windy, hang tarpaulins or cloths as previously described.

Other finishes such as floating with a wooden float and troweling, smooth surface, pebble dash, splatter dash, etc., are so well known as to need no further description.

If coloring matter is to be used, please bear in mind that the only lasting green is what is known as crominm oxide. This is quite expensive, but any sort of a substitute is worthless and will fade out within four or five months, making a refinish of the stucco necessary. In using coloring matter, mix coloring matter with the cement in proportions as described below.

Mix thoroughly until of an even color and mix the cement with the sand. Continue turning and raking until of an even color. Proportions of coloring matter to cement are as follows:

GRAY, LAMPBLACK OR BONEBLACK—½ lb. to 1 bag of Portland Cement.

BUFF—4 lbs of yellow Ochre to 1 bag of Cement.

REDDISH BROWN—6 lbs. of Red Iron Oxide to 1 bag of Cement.

RED—6 lbs. of Pompeian Red to 1 bag of Cement.

GREEN 7 lbs. of Cromium Oxide to 1 bag of Cement.

BLUE—4 lbs. of Ultra Marine to 1 bag of Cement.

ALFRED MOYER, Associated American Society of Civil Engineers.

# *Extracts from Report of Tests of Bishopric Stucco Board*

*Made by H. W. T. Collins, Meck., Eng.*
*Norwood, Ohio*
*In Charge of Mechanical Engineering Laboratories*
*University of Cincinnati*

The object of the tests was to determine the relative resistance to deformation in the plane of the wall, of sections of walls made of Bishopric Stucco Board nailed on studding and of sections of walls of standard construction.

When the wind acts on the side of a building, there are stresses set up in those walls at right angles to the surface upon which the wind acts. Those stresses tend to "rack" or cause a movement in the plane of the walls, which movement, although slight, is injurious to the interior or exterior plastering. The tests were performed to determine the resistance offered by the different types of construction hereafter described, to stresses approximating those caused by wind pressure.

Page 22, Test Section No. 1, Figure No. 1.

This consisted of a frame four feet high by eight feet long, made by two by four-inch rough studding spiked together with four-inch (20d) wire spikes, as shown in Figure No. 1. Bishopric Stucco Board was nailed to both sides of this frame with 1½-inch (4d) nail in each lath in each stud. The laths were laid horizontally.

Page 22, Test Section No. 2, Figure No. 1.

This consisted of a frame of the same size and construction as No. 1, but with common lath on one side and sheathing on the other. The sheathing boards were one inch thick, five and one half inches wide and eight feet long. Each board had two

nails 2½ inches long (8d) in each stud. The sheathing was not dressed, nor matched, but was closely laid and securely nailed.

Page 23 is a photograph of Test Section No. 1 (with stucco board on both sides of the frame) after a load of 2,650 lbs. had been applied. At this load, the rule showed deformation of $1\frac{3}{16}$ inches. On examination it was found that the spikes in the bottom of the first stud, (C, Fig. 1) had been pulled out, allowing the stud to rise. This upward movement increased, to some extent, the deformation as measured. The paper backing of the stucco board was also ruptured near the point where the stud had been pulled out.

Page 24 is a photograph of Test Section No. 2 (with common lath on one side and sheathing on the other), after a load of 1,650 lbs. had been applied. The deformation at this point was shown by the rule to be $5\frac{1}{16}$ inches. The stud (C, Fig. 1) was pulled up in a similar manner to that in No. 1, but to a less extent.

Figure 5, page 25, shows the load deformation curves of Test Sections No. 1 and No. 2, plotted to the same scale. It is evident from these curves that No. 1 is more rigid than No. 2.

NOTE.—A complete report of these and other very interesting tests can be had on application. Ask for "Copy of Tests."

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ELMIRA, N. Y., May 19, 1915.

THE MASTIC WALL BOARD AND ROOFING CO.,
Spring Grove and Este Avenues,
Winton Place, Cincinnati, Ohio.

Gentlemen—Yours of the 18th received, and in reply will say that I have just completed a house for Mr. Frank S. Jones, Vice-President of the Standard Distilling Co., Cincinnati, O., who resides in Elmira, N. Y., and I used the Bishopric Stucco or Plaster Board on the same, which seems to please my client very well.

I am now building a house for myself and I am also using the Plaster Board—in fact, I refer you to The Elmira Building Supply Co., whom I purchase these goods through. I expect to close a contract tomorrow for a Boston Flat, and I am talking Stucco Board to my client. If I can bring him to see how much better it is that to have us use building paper and lath, I shall place another order soon.

I received the sample all O. K., but had been a user of the same for some time, as I have used it on a large double house and also on a garage, and let me say that if it is properly applied, I believe it the most modern, up-to-date building material on the market.

Wishing you continued success, I remain,

Very sincerely,
GERTRUDE S. JONES.

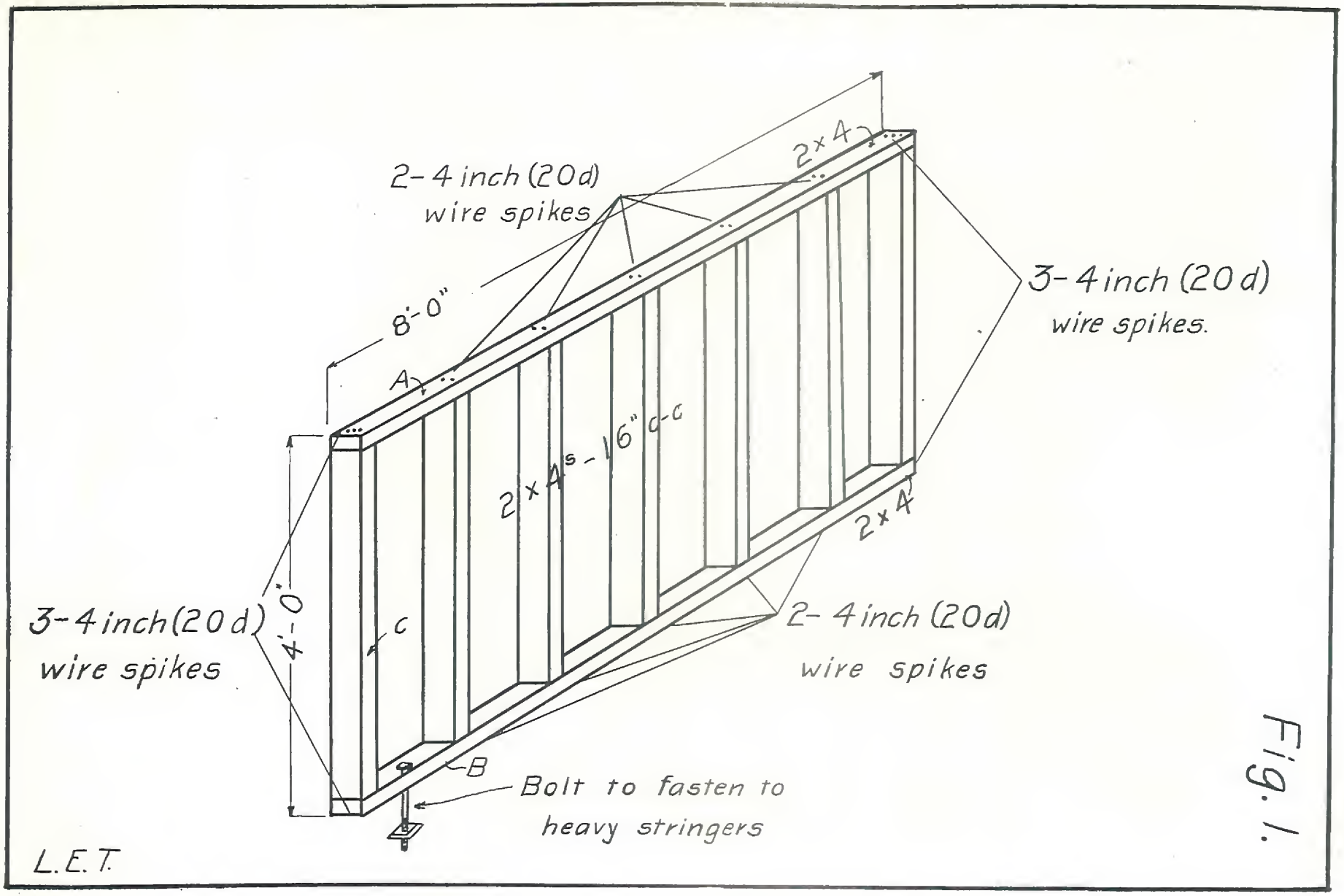
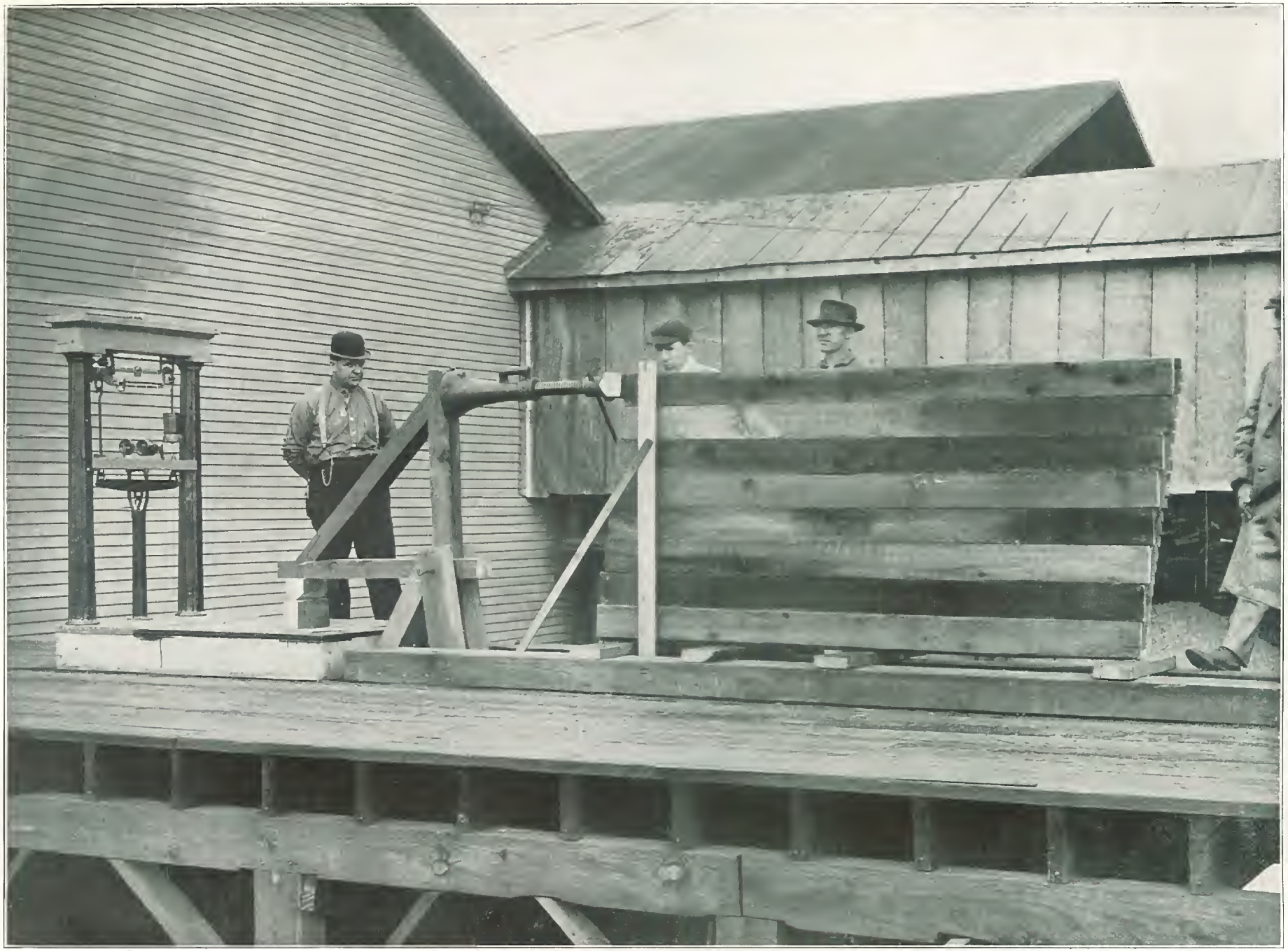

2-4 inch (20d)
wire spikes
2×4
3-4 inch (20d)
wire spikes.
8'-0"
A
2×4s - 16" c-c
2×4
3-4 inch (20d)
wire spikes
4'-0"
C
2-4 inch (20d)
wire spikes
B
Bolt to fasten to
heavy stringers
L.E.T.

Fig. 1.

Fig. 3

Fig. 4



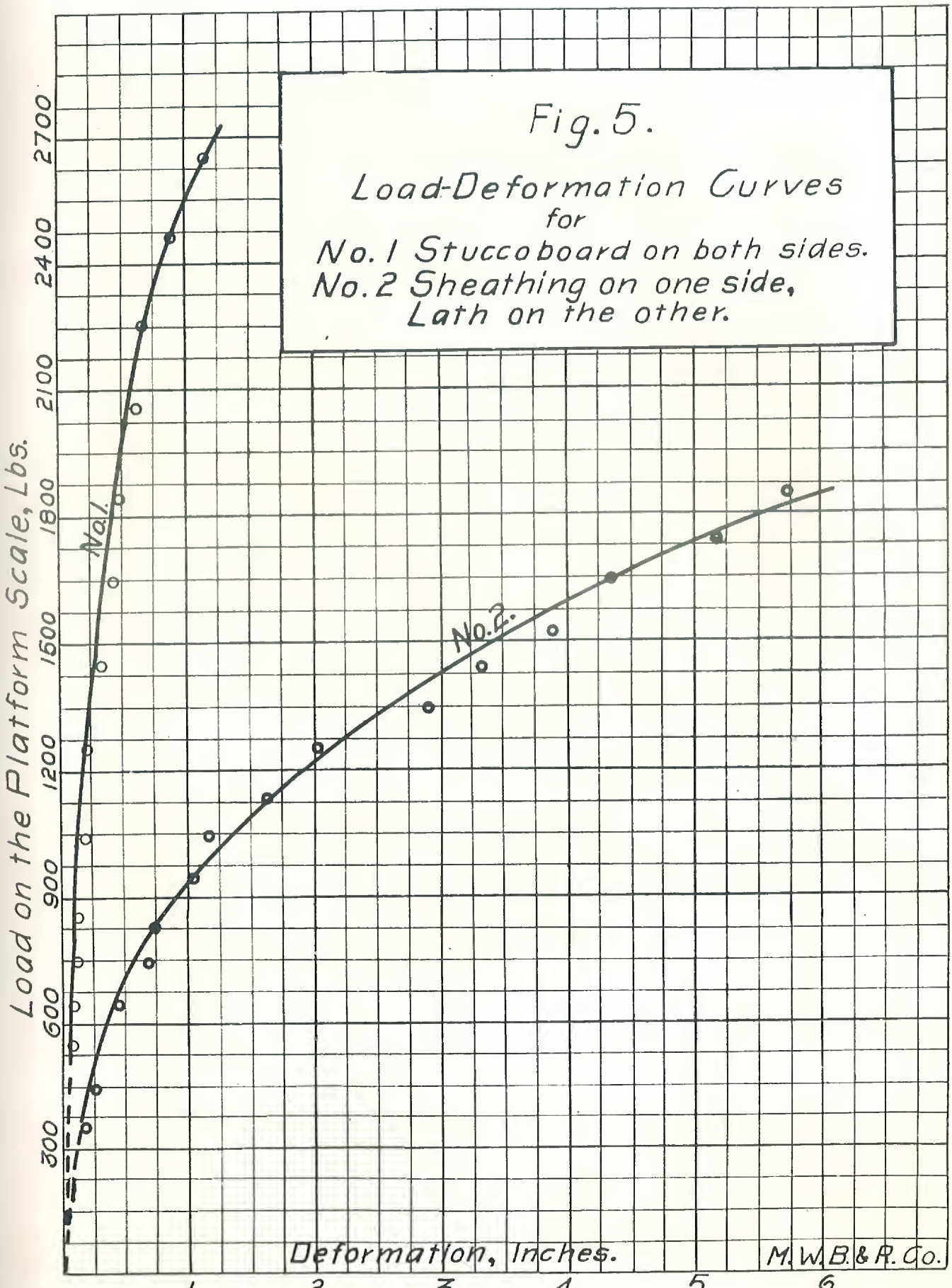


Fig. 5.
Load-Deformation Curves
for
No. 1 Stuccoboard on both sides.
No. 2 Sheathing on one side,
Lath on the other.
Load on the Platform Scale, Lbs.
300
600
900
1200
1500
1800
2100
2400
2700
No. 1.
No. 2.
Deformation, Inches.
1
2
3
4
5
6
M. W. B. & R. Co.

Bishopric Stucco Board used on this row of houses, Brook Avenue, Passaic, N. J. Owners, architects and builders, Passaic Building Co., Passaic, N. J.

Bishopric Stucco Board used on residence of Karl F. Hessenmueller, 1112 La Clare Street, Wilkinsburg, Pittsburg, Pa. Contractor, Arthur Vernon, Pittsburg, Pa. Architect, F. W. Hessenmueller, Long Acre Building, New York City.

Bishopric Stucco Board used on this residence at Palisades Park, N. J. Contractors, D. B. Owens & Bro., Palisades Park, N. J.

Eight six-family apartments on Commonwealth Avenue, Boston, Mass., built by F. A. Corbett & Co., owners and builders, extending 480 feet frontage from 1,710 to 1,740. Bishopric Stucco Board used on all exteriors. Stucco contractor, Louis De Angelus.

Bishopric Stucco Board used on three-family apartment of Edw. F. Freeman, Roxbury, Mass.

Bishopric Stucco Board used on this residence, Gallatin Street, Providence, R. I. Architect and builder, E. S. Godfrey, Providence, R. I. Stucco contractor, Geo. H. Robert, Providence, R. I.

Bishopric Stucco Board used on residence of Mr. H. W. Karrer, (owner and builder) Troy and Beach Avenue, Ventnor, Atlantic City, N. J.

Bishopric Stucco Board used on dairy barns of Edward Jennings, Weston, Mass. Architect, Russell Spring, Newton Lower Falls, Mass. Stucco contractor, M. Spankard, Waltham, Mass.

Bishopric Stucco Board used on residence of W. B. Porch, owner, architect and builder, Ventnor, Atlantic City, N. J. Stucco contractor, Chas. Q. Barker, 11 N. Victoria Avenue, Ventnor, Atlantic City, N. J.

Bishopric Stucco Board used on residence of W. D. Govin, Union, N. J. Architect, Richard Hayes, Union, N. J. Contractors, Hayes Construction Co., Elizabeth, New Jersey.

Bishopric Stucco Board used on residence of Ford Knapp, Foster and Grey Streets, Elmira, N. Y. Contractor, S. C. Woodside, Elmira, N. Y. Stucco contractor, Seeley June & Son, Elmira, N. Y.

Bishopric Stucco Board used on residence of Chas. E. Near, Elmira, N. Y.

Bishopric Stucco Board used on duplex apartment of Chas. E. Near, W. Church Street, Elmira, N. Y. Contractor, S. C. Woodside, Elmira, N. Y.

Bishopric Stucco Board used on this residence at Leonia, N. J. Architects and builders, Coover-Hitchcock Co., Leonia, N. J.

Residence J. R. O'Connor, Arlington, N. J. Architect, C. F. Zachan, 45 Clinton Street, Newark, N. J. Contractor, E. Sargent, North Arlington, N. J. Bishopric Stucco Board used.

Bishopric Stucco Board used on these two duplex apartments at Arlington, Mass. Contractor and builder, John C. Cameron, 59 Mt. Vernon Street, Arlington, Massachusetts.

Bishopric Stucco Board used on this nine-family apartment, Geneva and Olney Streets, Dorchester, Mass. Robt. Hamilton, architect and builder. Stucco contractor, Jermiah Noonan.

Bishopric Stucco Board used on interior and exterior of this house and garage. Plans drawn by Christiansen & Kremnitz, Architects, Milwaukee, Wis. Plastered by Wm. Fred Bauman, 860 Layton Building, Milwaukee, Wis.

Bishopric Stucco Board used on this residence, Gallatin Street, Providence, R. I. Architect and builder, E. S. Godfrey, Providence, R. I. Stucco contractor, Geo. H. Robert, Providence, R. I.

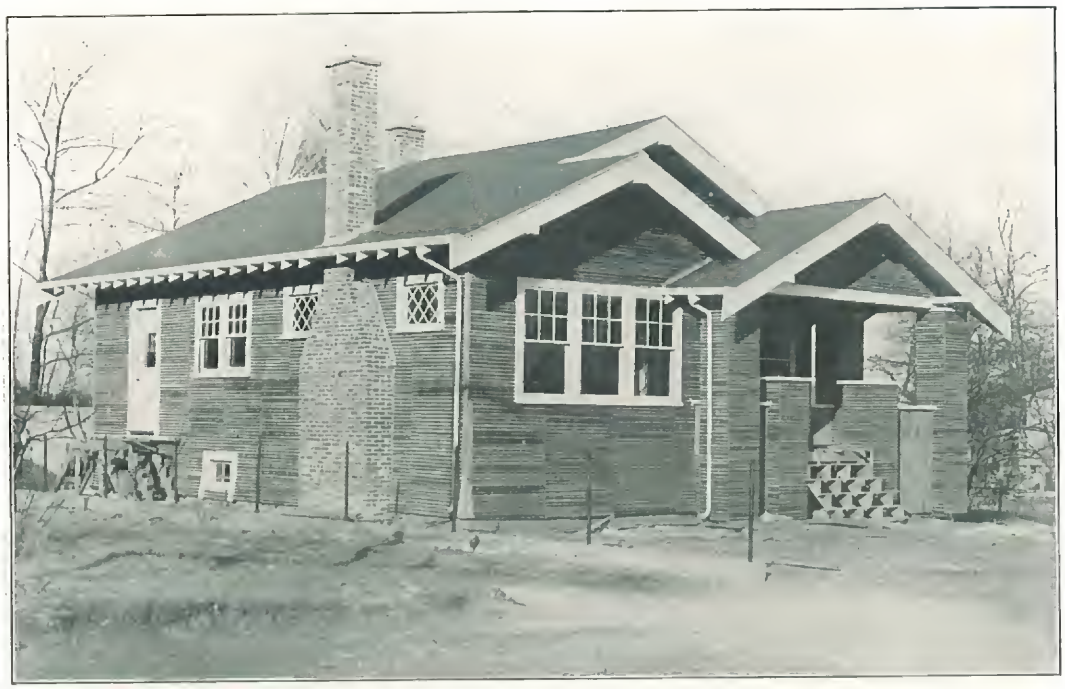
Bishopric Stucco Board used on this residence at Bloomfield, N. J. Architects and builders, Passaic Building Co., Passaic, N. J.

Bishopric Stucco Board used on this residence at Passaic, N. J. Owners, architects and builders, Passaic Building, Passaic, N. J.

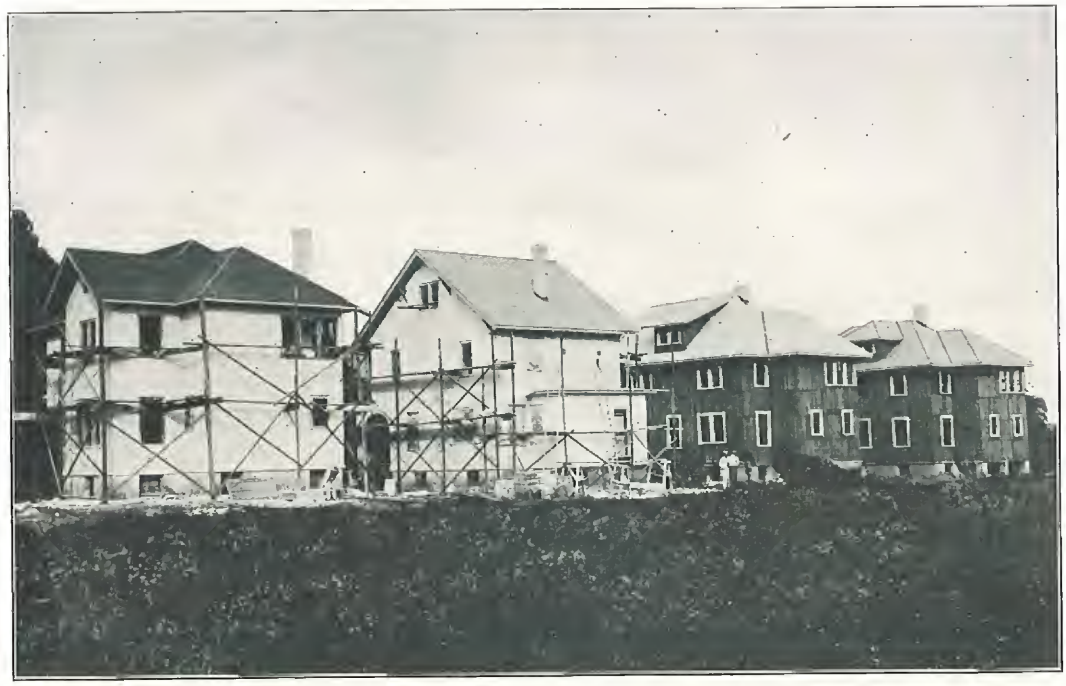
Bishopric Stucco Board used on residence of John J. Dyal, Tenth and Quincy Streets, Topeka, Kansas. Stucco contractor, W. S. Nash.

Residence on Green Lee Avenue, Avondale, Cincinnati, Ohio. Myers Y. Cooper, architect and builder. Bishopric Stucco Board after stucco was applied.

Residence on Green Lee Avenue, Avondale, Cincinnati, Ohio. Myers Y. Cooper, architect and builder. Bishopric Stucco Board before stucco was applied.



Bishopric Stucco Board used on residence of F. A. Carleton, 13 Troy Street, Lake Shore Park, Peabody, Mass.



Bishopric Stucco Board used on this row of houses at Montclair, N. J. Owners, architects and builders, Passaic Building Co., Passaic, N. J.

Bishopric Stucco Board used on residence of Architect Walter H. Lee, at Fernbank, Cincinnati, Ohio, for interior plastering.

Bishopric Stucco Board used on this parsonage at Woodbury, N. J. Architect, J. F. Stuckert, Philadelphia, Pa. Contractor, Joseph Best, Woodbury, N. J.

Bishopric Stucco Board used on residence of J. Nesselmueller, La Clare Street, near Hutchison Street, Wilkinsburg, Pa.

Bishopric Stucco Board used on residence of J. F. Erickson, Mounds, Ill. Contractors, Mattson, Knupp & McNew, Mounds, Ill.

# *Satisfied Users*

Boston, Mass., January 26, 1914.

The Mastic Wall Board & Roofing Co.,
Cincinnati, Ohio.

Gentlemen:—You may be interested to know that the writer has specified and used Bishopric Stucco Board in a house that he is building. We mention this because it shows our customers that we must have a good deal of faith in this material in order to use it ourselves, and this information may be of value to you in pointing out to your customers that your good distributors are not only selling your products, but using them.

My reason for using stucco board was principally on account of the saving in cost, and at the same time, I felt that stucco board would give me fully as good a foundation for stucco as any other material.

I was also anxious to put as little inside finish in the house as possible, and figured that by using stucco board I could let the smooth back of the sheet show between the studs and do away with any further finish on the inside of the wall.

Very truly yours,
WALDO BROTHERS,
By C. S. Waldo, Jr.

---

Mount Vernon, N. Y., November 11, 1914.

Building Committee,
City of Mount Vernon, N. Y.

Gentlemen:—We wish to submit for your approval the Bishopric System of Stucco Board, sample of which has been submitted to the Building Inspector, Mr. James R. Kain.

Realizing that it is necessary to get a material which will reduce the cost of the suburban house and make building possible, we are at the same time interested in improving the construction. To this end we have personally experimented with the material on four houses, the result being even better than we anticipated, as up to the present time we have not discovered a single crack in the entire work.

As to the insulation, we believe that the building will be very much warmer than one sheathed with rough boards and covered with cheap building paper.

We invite your personal inspection of the house built by us on Nyac Avenue, Pelham Heights, on which this material was used.

Yours very truly,
THE MILLIGAN COMPANY.

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Springfield, Mass., August 24, 1914.

The Mastic Wall Board & Roofing Co.,
Cincinnati, Ohio.

Gentlemen:—What will you deliver Stucco Board at Springfield per 1,000 square feet? I will need 1,000 square feet, perhaps 2,500.

I used it on Mr. Barton's house at Niagara, N. C., last winter, and like it very much. We used it on studding for stucco, and he has a fine looking bungalow—the best in that section.

Please let me hear from you as soon as possible and oblige,

Yours truly,
F. H. LECK,
Contractor and Builder.

Mr. A. D. Howard, Eastern Representative
The Mastic Wall Board & Roofing Co.,
Boston, Massachusetts.

Arlington, Mass., February 22, 1915.

Dear Sir:—Answering your inquiry as to my experience with the Bishopric Stucco Board on my Stucco Houses.

I am pleased to advise that I have used this board on four two-family houses on Dickson and Hills Streets, at Teale Square, West Somerville, and am entirely satisfied with the results.

Two of these houses were built during the spring of 1914, and have been completed and occupied since last summer. I had such satisfactory results with these two that I put up two more last fall, and am building two now on Boardway, on which I will use Stucco Board and have ready to be stuccoed as soon as the weather permits.

On the last two built I used your creosoted board and the creosoting has acted as a preservative during the winter and enabled me to go ahead with my inside plastering and finish.

I consider the Bishopric Stucco Board as the best and most satisfactory background for stucco on the market. My finished houses have stood through the winter without showing any cracks or signs of dampness, and I am pleased to recommend the material highly.

Yours very truly,
JOHN C. CAMERON,
Contractor and Builder.

509 Mt. Vernon St.

---

Newton Lower Falls, Mass., November 2, 1914.

The Mastic Wall Board & Roofing Co.,
Cincinnati, Ohio.

Gentlemen:—In regard to the Bishopric Stucco or Plaster Board I used inside and outside of Dairy Houses, Cow and Horse Stables one year ago, it is very satisfactory up to this time.

Yours truly,
E. JENNINGS.

---

Elmira, N. Y., November 7, 1914.

The Mastic Wall Board & Roofing Co.,
Cincinnati, Ohio.

Gentlemen:—The writer encloses you at this time a photo of house built by him. He is going to use the board on another house now in the course of construction, as it has proven very satisfactory thus far.

CHAS. H. NEAR.
Very truly yours,

---

Bronx, N. Y., May 11, 1915.

The Mastic Wall Board & Roofing Co.,
Cincinnati, Ohio.

Gentlemen:—I have specified your Stucco Board in my specifications for both jobs. I have used quite a lot of it, and have found it O. K.

Respectfully,
ROBERT SKRIVAN,
Architect.

Milwaukee, Wis., February 8, 1915.

Tews Lime & Cement Co.,
North and Humboldt Sts., Milwaukee, Wis.

Gentlemen:—The Bishopric Stucco Board which we have used in the construction of our work last summer has given perfect satisfaction. It was used on the inside of walls as well as on the outside.

Anybody using Bishopric Stucco Board will not make a mistake.

Respectfully yours,
CHRISTIANSEN & KEMNITZ, Architects.
Per Geo. A. Kremnitz.

---

Boston, Mass., March 27, 1915.

The Mastic Wall Board & Roofing Co.,
Cincinnati, Ohio.

Gentlemen:—Last year I purchased, through Waldo Brothers, Bishopric Stucco Board, as per bill of cost.

The walls have stood the winter fine, no cracks except a small hair line on each corner, the result of the house heaving owing to my not having gone deeper than two feet with my foundation posts.

The house stands in an exposed place and has had to stand the full force of northwest winds the whole winter.

Yours truly,
FRANK S. ABERCOMBE.

---

West Frankfort, Ill., March 20, 1915.

The Mastic Wall Board & Roofing Co.,
Cincinnati, Ohio.

Gentlemen:—Enclosed herewith pictures of Baptist Church and residence in which your Stucco Board played an important part.

We used 100 squares in the church job for plaster, and 18 squares in the residence for stucco.

The introduction given it on these jobs caused it to be used on many more here, and it is certainly satisfactory in every respect.

Yours very truly,
W. J. REINTJES, E. M.

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Annapolis, Md., August 31, 1914.

The Mastic Wall Board & Roofing Co.,
Cincinnati, Ohio.

Gentlemen:—I am in receipt of your favor of the 28th inst., asking for information about the house and store upon which I used the Bishopric Stucco Board.

The building is now completed, and it is admitted by competent judges to be a creditable structure.

I have not had the building photographed, neither have I had any thought of doing so, but if you desire to have photographs made I am perfectly willing to get them done for you for the purpose of use upon your files and literature.

I have no hesitancy in saying that the Bishopric Stucco Board is a splendid invention, and that it is my intention to use it largely in the future where the location and type of building will justify its use in the construction.

Yours very truly,
WALTER H. HART.
Architect.

Omaha, Nebraska March 9, 1914.

The Mastic Wall Board & Roofing Co.,
Cincinnati, Ohio.

Your explanation to my previous letter is entirely satisfactory, and will say that I am going to push this material of yours all I can in connection with my own special stucco. This and your wall board go hand in hand, and with the two materials I am able to construct houses much cheaper than when I use sheathing and siding, and at the same time it makes a better lasting surface than any wood siding, and has a better and neater appearance.

Yours very truly,
VICTOR F. BECK, Architect.

---

Milwaukee, Wis., January 25, 1915.

Tews Lime & Cement Co.,
North Avenue, Milwaukee, Wis.

Gentlemen:—Some time ago your Mr. Pipkorn sold 4,500 square feet of Stucco Board to me, which was used on my Cass-Wayne Apartments, located at 501 Cass Street.

This building is a four-story building, and I found I saved considerable money by not using sheathing wherever this stucco was used.

Bishopric Stucco board is the best material for background for outside plaster or stucco work that I have ever used.

Yours truly,
JOHN HUNHOLZ.

---

Milwaukee, Wis., January 26, 1915.

Tews Lime & Cement Co.,
Milwaukee, Wis.

Gentlemen.—Have used the Bishopric Stucco Board on several occasions, lately on a four-story apartment building, 501 Cass Street, Mr. John Hunholz, owner, and will say that it was very satisfactory and an advantage over the old way, as it saves space, labor and material. I can recommend it and will continue to use it.

Respectfully,
J. W. ANDREE.
Architect and Superintendent.

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Elcho, Wis., March 12, 1915.

The Mastic Wall Board & Roofing Co.,
Cincinnati, Ohio.

Gentlemen:—Used your Bishopric Stucco Board last year to build garage. Proved very satisfactory. Will use much more of it this year.

Yours truly,
R. P. GUPTILL.

Winston-Salem, N. C., March 29, 1915.

Messrs. C. M. Thomas & Company,

Winston-Salem, N. C.

Gentlemen:—In reply to yours of even date asking my opinion of Bishopric Wall Board and Stucco Board, I wish to state with much pleasure that I have yet to hear of one complaint from the many clients that I have specified Bishopric Wall Board and Stucco Board for in the erection of their buildings, either dwellings, apartment houses, or, in fact, all classes of buildings. I have used it in the trying climate of the North for years, including seacoast towns, where it has been put to the severest test. In my opinion it is far superior to the cheap grades of metal lath with which the market is flooded, that is, Bishopric Stucco Board, for it will not break or rust, and takes about 25 per cent less material in the way of cement than the ordinary way of using the plain lath. The Stucco Board holds the stucco as no other method does, by the "dove-tail" key. I cannot speak too highly of the good qualities, and I recommend its use to anyone who is desirous of having a warm dry house in winter and a cool one in summer.

You are at liberty to give my name to anyone whom you think would like to consult me further on the subject.

Yours truly,
C. GILBERT HUMPHREYS.
Architect.

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Ropes Brothers,

Builders' Supplies, Salem, Mass.

Salem, Mass., February 9, 1915.

Gentlemen:—I can say in regard to the use of Bishopric Stucco Board on the four houses corner of Walter and Foster Streets, North Salem, where I have applied it on the exterior, that I am well satisfied with it and believe it is the best material on the market for a basis for stucco exterior.

I feel it is an economical material to use, is very easy to apply, and makes a stronger and warmer job than any other method I know of.

The mastic backing to the bevelled lath prevents dampness striking through from the outside, and will tend to prevent rats gnawing.

I have finished two of my houses with stucco, and shall apply stucco to the other two in the spring when danger of frost is past, the Bishopric in the meantime keeping out cold and dampness.

JAMES CHALEFOUR, Contractor and Builder.

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Diagonal, Ia., October 13, 1914.

The Mastic Wall Board & Roofing Co.,

Cincinnati, Ohio.

Gentlemen:—I bought some Stucco Board of you a short time ago and have same on my house. It is a new thing in my town and everybody is pleased with it.

Yours truly,
ROY SHEETS,
Contractor and Builder.

### *Bishopric Sheathing*

### *"Better and Cheaper than Lumber"*

Bishopric Sheathing is made of the very same materials used in Bishopric Stucco Board. It is made in precisely the same way, the only difference being that the wood lath is not dovetailed. So far as service is concerned, it is equal to Bishopric Stucco Board. The same patents which cover Bishopric Stucco Board protect the exclusive manufacture by us of Bishopric Sheathing.


*Construction of Bishopric Sheathing.* — Arrow points to Asphalt Mastic, into which laths are imbedded. Bishopric Sheathing is nailed to outside of studding, laths and asphalt exposed as shown in cut. Over this, weather boards are nailed or cement applied. Used as a foundation for ready roofing, Bishopric Sheathing is applied to rafters, smooth side up. Used under flooring, either side may be up, though lath side up may be preferred, since it leaves dead-air space between laths and flooring.

### *Proof Against Cold and Dampness*

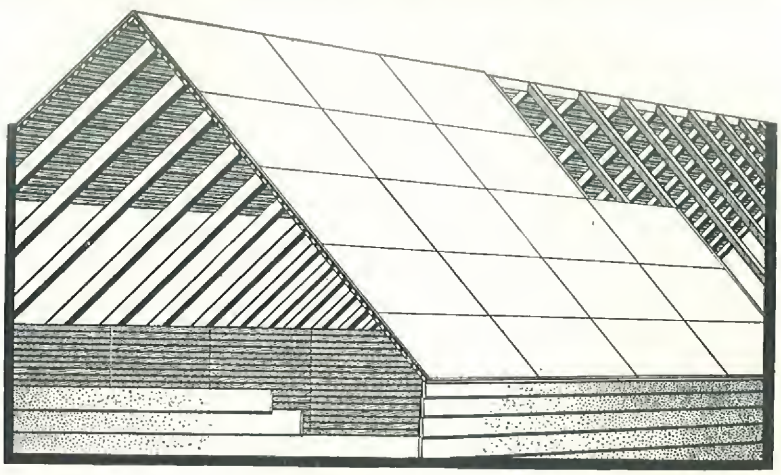
Bishopric Sheathing is proof against heat, cold, dampness, frost, wind and vermin. Being a non-conductor, it keeps the building cooler in summer and saves fuel in winter.

Photographic view of house in the construction of which Bishopric Sheathing is used, lath side exposed, and—note above foundation wall—weather boarding nailed over same, insuring a dry interior, warm in winter and cool in summer.

Bishopric Sheathing is used with equally splendid results under flooring and roofing boards. Used under floors, it serves as a sound deadener and keeps out dampness; used under the shingles, it keeps out Summer heat.

# *Sheathing Applied Two Ways*

Illustration below shows the application of Bishopric Sheathing over rafter and studding. In application over rafters, note that smooth side is up, the lath side showing up underneath the roof. In application over studding, note that lath side of sheathing faces the weatherboards, leaving dead air space between lath spaces and weatherboards. Bishopric Asphalt Mastic Roofing, or Pyramid Shingles, or any other ready roofing, may be applied easily over Bishopric Sheathing.



Bishopric Sheathing is nailed to the weather side of studs, with lath and asphalt side exposed. Over the laths, weatherboards are nailed or cement is applied. Compared with low grade wood, Bishopric Sheathing is preferred for the following ten reasons:

1—Bishopric Sheathing makes a more solid and substantial wall than lumber; therefore, develops greater wind strength. There are no gaping joints; no widening cracks due to shrinkage; no knot holes. It's like a solid board.

2—The Asphalt Mastic in Bishopric Sheathing is a non-conductor; is proof against heat and cold; keeps the building cooler in summer and warmer in winter.

3—The body of Bishopric Sheathing being Asphalt Mastic, moisture cannot penetrate it. The wall, therefore is proof against dampness.

4—Bishopric Sheathing is proof against vermin, weevils, etc. The pests cannot bore through the tough gummy Asphalt Mastic.

5—In applying weatherboards over the laths, dead air space is left between the laths, forming splendid insulation.

6—One wagon load of Bishopric Sheathing covers an area from six to ten times as great as one load of lumber—a tremendous saving in hauling. Five thousand feet can be hauled in an ordinary wagon.

7—The cost of applying ordinary wood sheathing is from $5 to $10 per 1,000 feet, where as the cost of applying Bishopric Sheathing is but $2.50 per 1,000 feet—A SAVING OF ABOUT 75 PER CENT. Furthermore, 1,000 square feet of wood sheathing covers but 750 feet of surface, 20 per cent less being due to tongue and groove. In Bishopric Sheathing 1,000 square feet covers 1,000 feet of space.

8—Bishopric Sheathing does away with the expense of building paper and cost of its application.

9—In applying ordinary lumber, heavier scaffolding, more tools and greater scaffold floor-space are required. In applying Bishopric Sheathing one man drives a few nails in each sheet; a common laborer or boy can finish the nailing.

# *Where Bishopric Stucco or Plaster Board May Be Used*

1. Bishopric Stucco or Plaster Board should be used in place of lath for all *interior* walls, ceilings and partitions in dwellings, apartments, tenements, office and flat buildings. The results obtained are economical and convincing.

*First.* You save twenty-five per cent in plaster materials, as well as twenty-five per cent of the amount of labor required to put on plaster.

*Second.* You obtain a wall which is a perfect sound deadener and which, for partition work inside dwellings, office or flat buildings has no equal for sound-retarding qualities.

*Third.* Bishopric Stucco or Plaster Board is so perfect a non-conductor of heat and cold that you can keep a uniform temperature in your house and have greater living comfort, with an actual saving of twenty-five per cent in fuel.

*Fourth.* Dampness positively cannot penetrate the asphalt mastic behind the lath, and your building will always be dry and healthful.

*Fifth.* Architects and experts proclaim Bishopric Stucco or Plaster Board the most up-to-date, scientific and efficient background for plaster which this age has produced.

2. Don't spend your money on wood sheathing and building paper for storm protection! Bishopric Stucco or Plaster Board on the outside of your studding makes them entirely unnecessary. It gives a more solid and substantial wall than lumber; therefore, develops greater wind strength. There are no gaping joints, no widening cracks due to shrinkage, no knot-holes. It's like a solid board.

3. Don't ceil your cellar with lath and plaster! The constant jarring above will develop cracks and loosen the plaster. Use Bishopric Stucco or Plaster Board! The key or dovetail holds plaster like nothing else can.

4. Use Bishopric Stucco or Plaster Board under your floors! It will prevent any dampness from penetrating into the house from the basement and it will make a wonderful difference in keeping your building dry and in preventing draughts.

Live comfortably! it costs no more! You can get all the above results and have the greatest living comfort possible in your home by using Bishopric Stucco or Plaster Board. It will give you walls that are sound-proof, moisture-proof, cold-proof, wind-proof, and in every way of a substantial, everlasting construction. Indorsements from our customers prove the above facts.


THE MASTIC WALL BOARD & ROOFING CO.
DOVETAILED LATH
CEMENT AND LATH DOVETAILED TOGETHER
CREOSOTED LATH
ASPHALT MASTIC
WATERPROOF FIBRE BOARD